

REMARKS

The Examiner is thanked for the careful examination of the application. However, in view of the following remarks, the Examiner is respectfully requested to reconsider and withdraw the rejections.

Claims 1-19 and 32-39 are pending. Claims 1, 13, 15 and 16 are independent.

The Office Action rejects claims 1-19 and 32-39 under 35 U.S.C. §103(a) over U.S. Patent No. 4,287,103 to Francis et al. in view of U.S. Patent No. 6,105,325 to Zuber et al. This rejection is respectfully traversed.

Independent claim 1 is directed to a gypsum board precoated during manufacture with a coating. The gypsum board comprises a gypsum core having a first side and a second side and a facing sheet disposed on the first side. A coating is disposed on an entirety of the facing sheet. At least a portion of the coating penetrates through at least a portion of the facing sheet and into the gypsum board.

The Office Action recognizes that Francis does not disclose that the gypsum board is precoated with a coating during manufacture, and that the coating penetrates through at least a portion of the facing sheet and into the gypsum core. Applicant respectfully disagrees with the Office Action's assertion that Zuber overcomes these deficiencies of Francis.

Zuber is directed to the construction of interior works wherein the structure and/or composition of a sheet lining paper and the composition of a joint pointing coat are coordinated with one another in the finishing of a joint. As discussed at the paragraph beginning at line 18 of column 3, Zuber uses prefabricated elements, plasterboards typically composed of a factory cast plaster body between two sheets

of paper forming both its lining and its reinforcement. In Zuber, the joint-pointing coat is applied only when the already manufactured plasterboards are assembled. See Zuber at column 4, lines 55-67. In Zuber, the joint-pointing coat can be used as a finishing coat which is applied on a sealing coat used to form the joints between flat elements. The general way of applying the joint-pointing coat in Zuber is similar to the way of applying joint composition in Francis. Because the Examiner recognizes that Francis does not disclose precoating a gypsum board during manufacture, it is difficult to see how Zuber overcomes this deficiency. Thus, Applicant's independent claim 1 is distinguishable over Francis and Zuber.

The Office Action asserts that it would have been obvious to one having ordinary skill in the art to have the joint composition of Francis and Zuber penetrate through the paper into the gypsum core, and further that because the same materials are being used as the facing sheet and coating, the coating would penetrate therethrough. This assertion is respectfully traversed.

Claim 1 recites that the coating penetrates into the gypsum core. It is noted that this claim feature results not only from certain elements used in the construction, but also from the methods disclosed in the specification by which the claimed boards are constructed. Accordingly, although claim 1 is a product claim, the product results from a combination of the materials used and the methods by which they are assembled. For example, one method of enabling the coating to penetrate into the gypsum core is to apply the coating when the board is wet. Francis teaches a specific viscosity of the joint compound (350 to about 750 Brabender units at 70F, column 6, lines 55 - 65), which is undoubtedly good for applying a joint compound, but is more than likely too thick to be used as a skim coat intended to precoat the

board on-line, let alone to penetrate into the surface of the facing. A similar argument can be made for Zuber. Thus, in the arguments set forth below, in some cases the method of construction is relevant, even though the claims define the resulting product.

In the present case, differences between the claimed features and the applied prior art can be determined from the information provided in Francis, Zuber and the specification of the present application. Clearly, a diluted form of joint compound applied to a wet board is going to result in a different structure and appearance than regular joint compound applied to a dry board. Clearly also, a precoated board, i.e. a board which is coated on-line thus when horizontal, will show uniformity in terms of coating thickness that cannot be achieved when a compound is trowelled on an already erected wall.

For example, better adhesion of the facing sheet to the gypsum board and increased board strength, as measured by nail pull, result from the methods taught in the present application. See, in particular, paragraphs [0065] to [0067] of the present application. The coating improves nail pull values by up to 25%. This allows for the use of facing sheets of lower weight or quality, with attendant cost reductions. These improved properties may not be attained by coating the boards in an already erected wall and in fact by only filling the shallow valley formed by the edges. These improved properties may only be attained by coating one side of the boards during the manufacturing process, which is reflected in the wording of present product claim 1 (which is about a precoated board).

As a result of the precoating process, the entire surface is coated and a portion of the coating penetrates into the gypsum core. As is explained in the

present specification, the depth of penetration of the coating is influenced by the relative moisture level and/or degree of set. And, if the moisture content is low, the coating may only penetrate into the paper facing sheet, i.e., and not into the core. See paragraph [0047] of the published application. Although the present invention is not limited to the preferred disclosed embodiments, one way of having the coating penetrate into the paper is to have the coating applied on a relatively wet board.

In contrast to the present application, Francis teaches only providing the joint compound in the valleys at the edge of the boards. Zuber teaches applying the joint-pointing composition on a sealing coat intended for forming the joints between the flat elements. Francis and Zuber do not teach putting the coating over the entirety of the facing sheet. In addition, Francis and Zuber neither mention nor suggest that the coating penetrates into the core. Furthermore, Francis and Zuber teach applying the coating to an assembled board that is presumably well set and dry. Accordingly, whether or not the same materials are used, as alleged by the Examiner, Francis and Zuber do not teach that the coating penetrates into the core. In fact, according to paragraph [0047] of the present application, it is likely that the coatings of Francis and Zuber do not penetrate into the core. Accordingly, contrary to the assertions of the Examiner, there is no teaching or suggestion of the Francis and Zuber coatings penetrating into the core.

Accordingly, claims 1 – 7, 9 and 12 are clearly patentable over Francis and Zuber.

Claim 13 also recites a coating disposed on at least a portion of the facing sheet such that the facing sheet has a level 5 finish. A level 5 finish is defined in the specification. The specification furthermore teaches a certain combinations of

materials that form the coating, various ways of applying the coating, such as on a wet board, and forming a skim coat with the coating. None of those features are taught or even suggested by Francis or Zuber. Accordingly, it is not sufficient to say that Francis or Zuber may use the same materials. Even if the materials were the same, Francis and Zuber do not teach the way of applying them that is taught in the present specification in order to arrive at the claimed product that includes a level 5 finish; especially that the boards of the invention are precoated boards which allows the achievement of a level 5 finish. However, the present invention is not limited to the specific embodiments disclosed in the specification.

Accordingly, in view of the differences between the methods taught by Francis and Zuber and the resulting boards of claims 13 – 14, Applicant submits that claims 13 – 14 are patentable.

Claim 15 also recites a coating disposed on at least a portion of the facing sheet such that the facing sheet has a level 4 finish. A level 4 finish is defined in the specification. The specification furthermore teaches a certain combinations of materials that form the coating, various ways of applying the coating, such as on a wet board, and forming a skim coat with the coating. None of those features are taught or even suggested by Francis or Zuber. Accordingly, it is not sufficient to say that Francis or Zuber may use the same materials. Even if the materials were the same, Francis and Zuber do not teach the way of applying them that is taught in the present specification in order to arrive at the claimed product that includes a level 4 finish; especially that the boards of the invention are precoated boards which allows the achievement of a level 4 finish. However, the present invention is not limited to the specific embodiments disclosed in the specification.

Accordingly, in view of the differences between the methods taught by Francis and Zuber and the resulting boards of claim 15, Applicant submits that claim 15 is patentable.

Claim 16 also recites that a kit includes a quantity of joint compound and a plurality of gypsum boards having a coating thereon, and that the coating is a diluted form of the joint compound. In contrast to claim 16, Francis and Zuber do not teach that there is both a coating on the board, as well as the joint compound.

Accordingly, claim 16, and dependent claims 17 - 19 are patentable over Francis and Zuber.

In view of the foregoing arguments, the Examiner is respectfully requested to reconsider and withdraw the rejections.

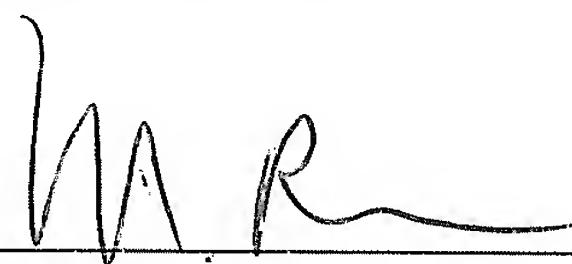
The Director is hereby authorized to charge any appropriate fees under 37 C.F.R. §§ 1.16, 1.17 and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 02-4800.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

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By:



Michael Britton
Registration No. 47260

P.O. Box 1404
Alexandria, VA 22313-1404
703 836 6620